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09/582,002

11/17/2000

Hossein Sfandari

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EXAMINER

RAMPURIA, SHARAD K

ART UNIT

PAPER NUMBER

2617

DATE MAILED: 08/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/582,002

Applicant(s)

SFANDIARI, HOSSEIN

Examiner

Sharad Rampuria

Art Unit

2617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 17 November 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 25-56 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 25-56 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

I. The Art Unit location of this application in the USPTO has changed. To aid in correlating any papers for this application, all further correspondence regarding this application should be directed to Art Unit 2617.

II. The current office-action is in response to the preliminary amendment filed on 11/17/2000.

There are three-preliminary amendments filed on 11/17/00, Examiner tried to contact the attorney to choose one of the three-preliminary amendments, but not succeed to get any response back, so Examiner selected the following preliminary amendment as explained below:

Accordingly, Claims 1-24 are cancelled and Claims 25-63 is imminent for further assessment as follows:

### ***Specification***

#### **III. Content of Specification**

- (a) Title of the Invention: See 37 CFR 1.72(a) and MPEP § 606. The title of the invention should be placed at the top of the first page of the specification unless the title is provided in an application data sheet. The title of the invention should be brief but technically accurate and descriptive, preferably from two to seven words may not contain more than 500 characters.
- (b) Cross-References to Related Applications: See 37 CFR 1.78 and MPEP § 201.11.
- (c) Statement Regarding Federally Sponsored Research and Development: See MPEP § 310.
- (d) The Names Of The Parties To A Joint Research Agreement: See 37 CFR 1.71(g).

Art Unit: 2617

- (e) Incorporation-By-Reference Of Material Submitted On a Compact Disc: The specification is required to include an incorporation-by-reference of electronic documents that are to become part of the permanent United States Patent and Trademark Office records in the file of a patent application. See 37 CFR 1.52(e) and MPEP § 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text were permitted as electronic documents on compact discs beginning on September 8, 2000.
- Or alternatively, Reference to a "Microfiche Appendix": See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.
- (f) Background of the Invention: See MPEP § 608.01(c). The specification should set forth the Background of the Invention in two parts:
- (1) Field of the Invention: A statement of the field of art to which the invention pertains. This statement may include a paraphrasing of the applicable U.S. patent classification definitions of the subject matter of the claimed invention. This item may also be titled "Technical Field."
  - (2) Description of the Related Art including information disclosed under 37 CFR 1.97 and 37 CFR 1.98: A description of the related art known to the applicant and including, if applicable, references to specific related art and problems involved in the prior art which are solved by the applicant's invention. This item may also be titled "Background Art."
- (g) Brief Summary of the Invention: See MPEP § 608.01(d). A brief summary or general statement of the invention as set forth in 37 CFR 1.73. The summary is separate and distinct from the abstract and is directed toward the invention rather than the disclosure as a whole. The summary may point out the advantages of the invention or how it solves problems previously existent in the prior art (and preferably indicated in the Background of the Invention). In chemical cases it should point out in general terms the utility of the invention. If possible, the nature and gist of the invention or the inventive concept should be set forth. Objects of the invention should be treated briefly and only to the extent that they contribute to an understanding of the invention.
- (h) Brief Description of the Several Views of the Drawing(s): See MPEP § 608.01(f). A reference to and brief description of the drawing(s) as set forth in 37 CFR 1.74.
- (i) Detailed Description of the Invention: See MPEP § 608.01(g). A description of the preferred embodiment(s) of the invention as required in 37 CFR 1.71. The description should be as short and specific as is necessary to describe the invention adequately and accurately. Where elements or groups of elements, compounds, and processes, which are conventional and generally widely known

in the field of the invention described and their exact nature or type is not necessary for an understanding and use of the invention by a person skilled in the art, they should not be described in detail. However, where particularly complicated subject matter is involved or where the elements, compounds, or processes may not be commonly or widely known in the field, the specification should refer to another patent or readily available publication which adequately describes the subject matter.

- (j) Claim or Claims: See 37 CFR 1.75 and MPEP § 608.01(m). The claim or claims must commence on separate sheet or electronic page (37 CFR 1.52(b)(3)). Where a claim sets forth a plurality of elements or steps, each element or step of the claim should be separated by a line indentation. There may be plural indentations to further segregate subcombinations or related steps. See 37 CFR 1.75 and MPEP § 608.01(i)-(p).
- (k) Abstract of the Disclosure: See MPEP § 608.01(f). A brief narrative of the disclosure as a whole in a single paragraph of 150 words or less commencing on a separate sheet following the claims. In an international application which has entered the national stage (37 CFR 1.491(b)), the applicant need not submit an abstract commencing on a separate sheet if an abstract was published with the international application under PCT Article 21. The abstract that appears on the cover page of the pamphlet published by the International Bureau (IB) of the World Intellectual Property Organization (WIPO) is the abstract that will be used by the USPTO. See MPEP § 1893.03(e).
- (l) Sequence Listing. See 37 CFR 1.821-1.825 and MPEP §§ 2421-2431. The requirement for a sequence listing applies to all sequences disclosed in a given application, whether the sequences are claimed or not. See MPEP § 2421.02.

### ***Double Patenting***

IV. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 25-63 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 25-44 of copending Application No.

09/728514. Although the conflicting claims are not identical, they are not patentably distinct from each other because all of the claimed limitations of the present U.S. Application No.

09/582002, for example, see Claims 25 and 32 are explained in following table, is transparently found in Claim 25 of the copending U. S. Application No. 09/728514 with obvious wording variations.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

<b><i>Instant Claim of U.S. Application No.</i></b> <b><i>09/582002</i></b>	<b><i>Related Claim of U. S. Application No.</i></b> <b><i>09/728514</i></b>
25. A method of detecting signals from a mobile terminal in a wireless communication network comprising at least one first base station serving the mobile terminal and at least	25. A method of detecting signals from a mobile terminal in a wireless communication network comprising at least one first base station serving the mobile terminal and at least

one second base station comprises:	one second base station comprises:
receiving the signals from the mobile terminal at the first base station; receiving the signals from the mobile terminal at the second base station; detecting information data in the signals from the mobile terminal at the first base station; processing the detected information data; and	receiving the signals from the mobile terminal at the first base station; receiving the signals from the mobile terminal at the second base station; detecting information data in the signals from the mobile terminal at the first base station; processing the detected information data; and
signal processing the received signals from the mobile terminal at the second base station by using the processed detected information data to enable improved detection of the signals from the mobile terminal;	signal processing the received signals from the mobile terminal at the second base station by using the processed detected information data to enable improved detection of the signals from the mobile terminal;
32. The method of Claim 31, wherein the detected received power is used for handoff preparation from the first base station.	the preparing for handoff of the mobile terminal to the second base station in order to improve detection of the transmitted information data from the mobile terminal

***Claim Rejections - 35 USC § 102***

- V. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

VI. Claims 25-31, 33-55, and 57-63 are rejected under 35 U.S.C. 102 (e) as being anticipated by Oprescue-Surcobe et al. [US 5842130].

As per claim 25, Oprescue-Surcobe teaches:

A method of detecting signals from a mobile terminal in a wireless communication network comprising at least one first base station serving the mobile terminal and at least one second base station, (Abstract, Col.3; 13-30) wherein the method comprises:

Receiving the signals from the mobile terminal at the first base station; (e.g. at the first base station; Col.9; 20-52)

Receiving the signals from the mobile terminal at the second base station; (e.g. at the second base station; Col.9; 20-52)

Detecting information data in the signals from the mobile terminal at the first base station; (e.g. at the first base station; Col.9; 20-52)

Processing the detected information data; (e.g. transfer the information; Col.9; 20-52) and

Signal processing the received signals from the mobile terminal at the second base station by using the processed detected information data to enable improved detection of the signals from the mobile terminal; (e.g. beam determination; Col.9; 20-52)



As per claim 26, Opresecue-Surcobe teaches:

The method of Claim 25, wherein:

Receiving the signals from the mobile terminal at the first base station of sufficient quality to enable detection of the information data in the received signals at the first base station; and receiving the signals from the mobile terminal at the second base station not of sufficient quality to enable detection of the information data in the received signal at the second base station. (Col.7; 22-35, Col.5; 18-32)

As per claim 27, Opresecue-Surcobe teaches:

The method of Claim 25, further comprising:

Transferring the detected information data from the first base station to the second base station; processing the detected information data at the second base station; signal processing the received signals from the mobile terminal at the second base station by using the processed detected information data to enable improved detection of the signals from the mobile terminal; (e.g. beam determination; Col.9; 20-52)

As per claim 28, Opresecue-Surcobe teaches:

The method of Claim 25, wherein the information data transmitted by the mobile terminal is unknown information data. (Col.8; 54-65)

As per claim 29, Opresecue-Surcobe teaches:

The method of Claim 25, wherein the information data transmitted by the mobile terminal comprises a predefined sequence. (Col.8; 54-65)

As per claim 30, Oprescue-Surcobe teaches:

The method of Claim 25, wherein the signal processing the received signals from the mobile terminal at the second base station comprises:

Detecting a received time delay caused by signal propagation due to distance between the mobile terminal and the second base station; and calculating the received time delay. (Col.7; 22-35, Col.5; 18-32)

As per claim 31, Oprescue-Surcobe teaches:

The method of Claim 25, wherein the signal processing the received signals from the mobile terminal comprises detecting a received power of the received signals from the mobile terminal at the second base station. (e.g. based on power; Col.7; 22-35)

As per claims 33, 57, Oprescue-Surcobe teaches:

The method of Claims 25, 55, wherein the wireless communications network is a cellular communications direct sequence spread spectrum code division multiple access (DS-CDMA) system. (e.g. DS-CDMA; Col.3; 13-30)

As per claims 34, 58, Oprescue-Surcobe teaches:

The method of Claims 25, 55, wherein the signal processing the received signals from the mobile terminal at the second base station includes a correlation operation using the processed detected information data to enable integration over a period substantially longer than one information data symbol period. (e.g. based on signal determination; Col.6; 26-38)

As per claims 35, 59, Oprescue-Surcobe teaches:

The method of Claims 25, 55, wherein the detected information data is used to identify the mobile terminal. (Col.8; 32-36)

As per claim 36, Oprescue-Surcobe teaches:

The method of Claim 25, wherein the processing of the detected information data is performed at any one of the plurality of elements of the wireless communication network. (Col.3; 13-30)

As per claim 37, Oprescue-Surcobe teaches:

The method of Claim 36, wherein any one of the plurality of elements of the wireless communication network is selected from the group consisting of a base station, a base station controller, and a mobile switching center. (e.g. a base station, BSC, MSC; Col.3; 13-30)

**Claims 38, 40, 42** is the method claims corresponding to method claim 36 respectively, and rejected under the same rational set forth in connection with the rejection of claim 36 respectively, above.

*Claims 39, 41, 43* is the method claims corresponding to method claim 37 respectively, and rejected under the same rationale set forth in connection with the rejection of claim 37 respectively, above.

As per claim 44, Oprea-Surcobe teaches:

A system for detecting signals from a mobile terminal in a wireless communication network, (Abstract, Col.3; 13-30) the system comprising:

At least one first base station serving the mobile terminal; (e.g. at the first base station; Col.9; 20-52)

At least one second base station; (e.g. at the second base station; Col.9; 20-52)

A first receiver at the first base station configured to receive signals from the mobile terminal and to detect information data from the mobile terminal; (e.g. at the first base station; Col.9; 20-52)

A second receiver at the second base station configured to receive signals from the mobile terminal and to detect information data from the mobile terminal; (e.g. at the second base station; Col.9; 20-52)

A processor configured to process the information data detected at the first receiver at the first base station; (e.g. at the first base station; Col.9; 20-52) and

A signal processor configured to signal process the received signals from the mobile terminal by the second base station by using the processed detected information data, to enable

improved detection of the signals from the mobile terminal. (e.g. beam determination; Col.9; 20-52)

*Claims 45-54* is the system claims corresponding to method claims 26-35 respectively, and rejected under the same rationale set forth in connection with the rejection of claims 26-35 respectively, above.

As per claim 55, Oprescue-Surcobe teaches:

A method of detecting signals from a mobile terminal in a wireless communication network comprising at least one first base station serving the mobile terminal and at least one second base station, (Abstract, Col.3; 13-30) wherein the method comprises:

Receiving the signals from the mobile terminal at the first base station; (e.g. at the first base station; Col.9; 20-52)

Receiving the signals from the mobile terminal at the second base station; (e.g. at the second base station; Col.9; 20-52)

Detecting information data in the signals from the mobile terminal at the first base station; selecting a portion of the detected information data; (e.g. at the first base station; Col.9; 20-52)

Transferring the selected portion of the detected information data from the first base station to the second base station; (Col.9; 20-52)

Scrambling the transferred selected portion of the detected information data to be substantially similar in envelope and phase to the signals transmitted by the mobile terminal

corresponding to the selected portion of the detected information data; (Col.6; 10-25, Col.9; 20-52)

Signal processing the received signals from the mobile terminal at the second base station by using the scrambled selected portion of the detected information data to enable improved detection of the signals from the mobile terminal; (Col.9; 20-52)

Detecting a received time delay caused by signal propagation due to the distance between the mobile terminal and the second base station; (Col.6; 10-25) and

Detecting a received power of the received signal from the mobile terminal at the second base station. (e.g. based on power; Col.7; 22-35)

As per claim 60, Oprescue-Surcobe teaches:

The method of Claim 25, wherein the signal processing the received signals from the mobile terminal at the second base station comprises singularly or in any combination a signal processing technique selected from the group consisting of:

- serial correlation signal processing;
- matched filter correlation signal processing;
- maximum likelihood sequence estimation signal processing;
- joint-detection signal processing; and
- multi-user detection signal processing. (Col.3; 31-40)

As per claim 61, Oprescue-Surcobe teaches:

The method of Claim 25, additionally comprising signal processing the received signals from the mobile terminal at the first base station by using the processed detected information data to enable improved detection of the signals from the mobile terminal. (Col.4; 41-53)

As per claim 62, Opresecue-Surcobe teaches:

The method of Claim 25, wherein the receiving the signals from the mobile terminal at the first base station occurs through a communication channel, wherein the communication channel comprises singularly or in any combination a communication channel selected from a group consisting of:

- a traffic channel;
- a random access channel; and
- a control channel. (Col.3; 41-52)

As per claim 63, Opresecue-Surcobe teaches:

The method of Claim 62, wherein the communication channel operates singularly or in any combination in a mode selected from a group consisting of:

- a circuit switched mode; and
- a packet switched mode. (Col.3; 31-40)

### ***Claim Rejections - 35 USC § 103***

VII. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

VIII. Claims 32 & 56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oprescue-Surcobe in view of Rudrapatna et al. [US 6052598].

As per claims 32, 56, Oprescue-Surcobe teaches all the particulars of the claim except wherein the detected received power is used for handoff preparation from the first base station. However, Rudrapatna teaches in an analogous art, that the method of Claims 31, 55, wherein the detected received power is used for handoff preparation from the first base station. [Col.4; 42-56] Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Oprescue-Surcobe including wherein the detected received power is used for handoff preparation from the first base station in order to provide a method of predicting the location of the device to handover to the new base station.



***Conclusion***

IX. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sharad Rampuria whose telephone number is (571) 272-7870. The examiner can normally be reached on M-F. (8:30-5).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, George Eng can be reached on (571) 272-7495. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://portal.uspto.gov/external/portal/pair>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free) or [EBC@uspto.gov](mailto:EBC@uspto.gov).



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